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ABSTRACT

This paper presents results from two qualitative studies of preservice and inservice teacher portfolios that considered how portfolios function as tools for knowledge representation and reflective thinking. In the first study, data were collected from think-aloud protocols, semi-structured participant interviews, and the analysis of supporting Teacher Education Program portfolio documents and the completed portfolios. Participants were in the final term of a Master's in Teaching program. In the second study, data were obtained through semistructured interviews and ethnographic observations of four accomplished secondary school teachers. These studies suggest the contextual factors that may determine portfolio effectiveness and shed light on the dilemmas faced when the attempt is made to translate the theory of teacher portfolios into practice. The dilemmas revolve around the following questions: (1) superficial description or deep reflection? (2) dead-ends or continuing professional development? (3) high-stakes assessments--motivating or distorting? (4) new technological tools--affording or constraining? and (5) portfolios and professional status--recognition or risk? (Contains 10 references.) (SLD)

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Translating Theory into Practice: The Dilemmas of Teacher Portfolios

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Abstract

This paper presents results from two qualitative studies of preservice and inservice teacher portfolios that considered how portfolios function as tools for knowledge representation and reflective thinking. These studies suggest what contextual factors may determine portfolio effectiveness and shed light on the dilemmas we face when we attempt to translate the theory of teacher portfolios into practice. The dilemmas revolve around the following issues: 1) Superficial description or deep reflection? 2) Dead-ends or continuing professional development? 3) High-stakes assessments—motivating or distorting? 4) New technological tools—affording or constraining? 5) Portfolios and professional status—Recognition or risk?

Translating Theory into Practice: The Dilemmas of Teacher Portfolios

Quality teaching is now recognized to be a result of complex professional judgments that arise out of teacher knowledge and the thoughtful examination of one's practice. Reformers seeking to encourage this kind of quality teaching have proposed portfolios as a device for documenting teacher knowledge, for reflecting on practice, and for fostering professional development (i.e., Shulman, 1987a; 1992).

Though proponents cite strong theoretical support for their use by teachers (Wolf, Whinery, & Hagerty, 1995), there is little empirical evidence of the effects of portfolios or the necessary conditions for their effective use. We have especially limited knowledge of how contextual factors afford or constrain teachers' reflective thinking and representation of pedagogical content knowledge in portfolios. Under what conditions are portfolios likely to result in improved practice and enhanced student learning? How do particular portfolio frameworks and technological tools impact process and product?

This paper summarizes findings from two separate qualitative studies of preservice and inservice teacher portfolios that shed light on these questions and give us some idea of the dilemmas we face when we attempt to translate the theory of teacher portfolios into practice. One of the studies (Carney, 2001) analyzed six preservice teacher portfolios and focused on how electronic and traditional portfolios function as tools for teacher knowledge representation. The second study (Jay, 2001) considered the manner in which a National Board of Professional Teaching Standards portfolio prompted reflective thinking among four master teachers, focusing on conditions in the setting that enhanced or inhibited reflection.

Perspectives/theoretical framework:

Carney (2001) used a sociocultural frame to consider how the tool chosen for portfolio authoring interacts with other artifacts in a setting to influence conceptions of portfolio audience, purpose, form and content. The six cases in this study of preservice teachers included both a traditional and an electronic portfolio from three secondary subject areas: English/language arts, social studies, and science (physics). The electronic portfolios in the study were authored with web editing software (i.e., FrontPage or PageMill) and presented on the Web.

The study conducted by Jay (2001) had as its primary goal to seek out potentially reflective activities in four master teachers' lives and identify what conditions nurture or constrain reflective practice. Jay defined *reflection* in this way: "Reflection is looking back on experience in a way that informs practice, learning in the midst of practice, and/or making informed and intelligent decisions about what to do, when to do it, and why it should be done" (Richert, 1990; Schon, 1983; Shulman, 1987b). During the study, one important context for structured reflection and professional development for participants was the creation of a National Board for Professional Teaching Standards (NBPTS) Portfolio.

Methods and procedures:

Study number one (Carney, 2001) collected data by means of think-aloud commentaries, semi-structured participant interview, and analysis of both supporting Teacher Education Program (TEP) portfolio documents as well as the completed portfolios themselves. The participants in this research had recently completed student

teaching and were in the final term of a 5-quarter Master in Teaching program at a large research university.

In study number two (Jay, 2001), data was obtained through semi-structured clinical interviews and ethnographic observations. Participants were four accomplished secondary teachers with ten to thirty years of experience, chosen from four different academic disciplines: English/language arts, social studies, mathematics, and science.

Findings

The findings of these two studies reveal some of the conditions under which preservice and inservice portfolios are likely to be effective in documenting and developing teacher knowledge; they also suggest some dilemmas we may face when we attempt to translate the theory of teacher portfolios into practice. The scope of this paper does not allow for an comprehensive presentation of findings; we will instead be offering limited supporting data in order to be able to focus on the dilemmas made apparent by the research.

Common Findings: Preservice and Inservice

The studies had two findings in common:

1) Portfolio standards and rubrics are highly influential in structuring particular kinds of reflection and knowledge representation; subtle features can have unintended effects.
2) Portfolios are most effective in documenting teacher knowledge, prompting teacher reflection, and improving practice when grounded in artifacts of practice, especially items indicating student learning.

After discussing each of these general findings, we will present two findings particular to the preservice teacher portfolio study and two that emerged most strongly in the inservice teacher study.

Highly influential standards and rubrics. Carney found limited reflection on student learning in the preservice teacher portfolios she studied-- a situation found to be related to subtle features in the portfolio requirements and rubrics devised by the authors' teacher education program. In their portfolios, these preservice teachers engaged in very little discussion of the effectiveness or ineffectiveness of their instruction; they also displayed limited capacity for adapting or tailoring instruction to meet student learning needs. Their portfolio documents and reflective entry slips instead emphasize teacher actions. TEP requirements and rubrics for portfolio construction seem to have inadvertently contributed to this situation.

The types of artifacts required in the TEP portfolio are focused on teacher action: i.e., lesson plans, papers written for university courses, classroom management plan, evidence of subject matter knowledge, etc. Student work and other items showing the results of instruction are all *optional*. As a result there are relatively few samples of student work in the portfolios (from 3 to 18 items), and portfolio authors made only the most general of comments on these student products; they did no detailed analysis. Does this mean preservice teachers lack the capacity for such reflection?

Novice teachers have limited familiarity with student learning characteristics and have not yet developed the automaticity that enables experienced teachers to closely monitor student learning during instruction, so we might expect a certain paucity of reflection in this area. However, a think aloud conducted with the participant who

included 18 pieces of student work in her portfolio ("Hannah") revealed that this reflection was indeed taking place. Despite the fact that Hannah included twice as many student work artifacts as any other participant, she provided no commentary or analysis of them. During the think aloud, which was a work session when she was choosing student work, Hannah was thinking deeply about the significance of each sample. Yet there was no evidence of that reflection in her portfolio. The rubric being used for evaluation of these portfolios may be responsible.

As noted previously, TEP portfolio requirements making student work optional may have induced portfolio authors to limit the number of those artifacts; however, it was the rubric used to evaluate reflective thinking in the portfolios that seems to have inhibited the preservice-teacher participants from carefully analyzing the student work they did choose. This particular rubric focused not on student learning, but rather on social, moral, and political issues of practice.

Another interesting finding related to student work is that the samples authors chose are not the most appropriate for prompting teacher thinking about student learning. Nearly all the K-12 student artifacts in these portfolios are full-credit or "A" papers. Mediocre or poor student work might be more useful in a portfolio, since these products reveal student learning difficulties, and would be more likely to induce preservice teachers to ponder why their instruction had been ineffective. Probably because of audience concerns, portfolio authors were not eager to include such evidence of the inadequacy of their teaching. Portfolio frameworks may have to mandate such documents and devise rubrics that reward reflection on student *mis*understanding rather than mastery.

In contrast to Carney's findings, Jay found extensive reflection on student learning in the experienced teachers' portfolios. This aspect of the portfolios, revealed to be one of their strongest advantages as tools for teacher reflection, resulted from the structure of the National Board requirements. However, like the portfolio frameworks in Carney's study, the National Board structure simultaneously created unintended effects.

Of numerous reflective activities examined in Jay's study, the National Board Portfolios were the most highly structured activities, for several reasons. First, the National Board identified the specific standards on which teachers were to reflect, determined the aspects of teaching to which teachers were to apply the standards, and prompted the teachers' thinking with particular questions. For example, the directions for Adolescent/Young Adult English/Language Arts portfolio require teachers to reflect on nine standards (e.g. "knowledge of students," "instructional resources" and "learning environment") in the context of a whole-class discussion by responding to questions like, "What are the instructional challenges represented by this particular group of students;" "What are the instructional goals for this particular lesson?" and "To what extent did you achieve the lesson's goals?" After completing the reflection as guided by the NBPTS materials, teachers could also self-assess their entries using lengthy, detailed rubrics explaining how their response would be scored. The teachers reported that the reflective process as guided by the National Board portfolio made them consider practice in greater depth and, sometimes, in new ways, and often influenced their practice in positive ways.

However, they also noted that the process was cumbersome, time-consuming, and even excessive. One participant noted that it also become routine for her.

> After awhile it gets to be like reciting…The [standards] are repeated so often in [the materials], and the language is so *standard* that after awhile it becomes almost meaningless (Interview, 10/19/00).

Overall, the highly structured nature of the National Board's reflective process did foster reflection effectively, but also had unintended negative effects.

Artifacts of practice and reflection to increase student learning. A second finding of both studies is that portfolios are most effective in documenting teacher knowledge, prompting teacher learning and improving practice, when grounded in artifacts of practice, especially items indicating student learning.

The preservice portfolios studied by Carney were not particularly effective in prompting reflection on student learning; however, she found that the portfolios did effectively document other aspects of novice teachers' pedagogical knowledge. Lesson plans included as artifacts, and the entry slips that accompanied them, demonstrated each portfolio author's capacity for transforming subject matter knowledge into curriculum, representations, and instructional strategies for teaching—what Shulman (1987) referred to as *pedagogical content knowledge*. Theoreticians have suggested that portfolios can be used to assess teacher knowledge; Carney found that these portfolios did indeed demonstrate differing levels of pedagogical content knowledge. It was obvious that some of the participants had much more extensive pedagogical repertoires than others; similarly, some displayed greater internal consistency of purpose and method. Evidence of pedagogical knowledge, however, was not presented systematically or thoroughly in these portfolios because the authors were not prompted to do so by TEP portfolio recipes.

For the experienced teachers creating their National Board portfolios, student learning was a significant aspect of reflection. They videotaped lessons and reflected on

the students' learning; they collected samples of student work and considered their conceptual understanding; they even tied their professional activities outside the classroom to their effects on student learning. This element of the portfolio revealed itself to be effective, especially when compared to reflection in other contexts. Compared to the evidence that the National Board portfolio process was both reflective and productive for their teaching, the evidence of other reflective activities that did *not* incorporate artifacts of practice seemed shallow and ineffective. For example, analysis of the data showed that of all the reflective instances experienced by the teachers in the course of the study, every single one that the teachers identified as being "highly valuable" activities incorporated the consideration of student learning using artifacts of practice. The instances that teachers identified as "the least valuable" did not.

Having discussed the two findings common to both preservice and inservice portfolios, we will now consider points specific to each study.

Preservice

Two findings from the Carney study suggest ways in which preservice teacher portfolios are effective:

1) Preservice portfolios are best able to document teacher pedagogical content knowledge when they prompt authors to enunciate purposes for teaching subject matter.
2) Preservice teachers value the way portfolios help them conceptualize self as teacher and find a balance between university coursework and field experience.

Enunciating purposes for teaching subject matter. Carney's study suggests that for secondary teachers at least, taking a theoretical stance on the teaching of one's subject matter may be nearly as important as formulating one's general philosophy of education. Defining purposes for teaching subject matter is important for assessing the appropriateness of one's curriculum, representations, and instructional strategies; portfolio authors who enunciated that purpose displayed a much more extensive and internally consistent body of *representations* (Shulman, 1987b) for teaching. If a student teacher used generic instructional strategies, or strategies not well adapted to his or her own pedagogical purposes but instead derived from the cooperating teacher's practice, the preservice portfolio is a good place for thinking about the incongruities. A practicing teacher, in constructing a portfolio, may also discover she is using methods ineffective for achieving her goals.

Conceptualizing self as teacher and balancing university and field. Preservice teachers value the way portfolios help them conceptualize self as teacher and find a balance between university coursework and field experience. All six participants in the Carney study identified this opportunity to define and represent who they are as a teacher to be the most valuable aspect of portfolio authoring. Portfolios do this by prompting a teacher to take a theoretical stance on what constitutes good teaching and then present artifacts showing self as that kind of practitioner.

What portfolio structures help preservice teachers perform this theoretical act? These case studies suggest that being asked to formulate a philosophy of education and choose artifacts consistent with it is a good way to begin. During student teaching or earlier fieldwork, preservice teachers are forced to do many things they may later come to

recognize are "not me." Constructing a portfolio is an excellent way to critically examine what was learned in university coursework, compare it to what was learned in the field, and decide which parts of each are faithful to one's own philosophy of education. For a practicing teacher, portfolio authoring would function in much the same way—compelling the teacher to articulate her philosophy of education and evaluate aspects of her pedagogy to determine whether they are consistent with beliefs and values.

Inservice

Two findings from the Jay study give us insight into the conditions that support reflection and inservice teacher motivation to reflect:

1) Inservice portfolios support reflection on teaching practice when particular conditions are present: teacher intentionality and capacity, a climate valuing reflection, materials to guide activity, and adequate time.
2) Inservice teachers perceive portfolio activities as most valuable when they are closely related to classroom goals and are likely to result in benefits for students.

Conditions for reflection. The Jay study, which compared teachers' reflection in a number of contexts, revealed that reflective activities in general (including portfolio creation) are most likely to occur and be meaningful to teachers under these conditions, as defined below.

- Intentionality: Teachers were inspired or motivated to reflect on a given matter, so they set the intention to do so.
- Capacity: Teachers knew strategies for reflection and were able to move beyond simply participating in, noticing, recognizing, or describing a situation to actually analyze it and consider its implications for teaching and learning.
- A climate valuing reflection: By nature, reflection requires teachers to (often publicly) open their practice to critique—a process antithetical to the traditionally isolated and private work of teaching. A climate allowing such vulnerable

exploration involves trust, safety, and an appreciation for the challenges of the profession.

- Materials to guide activity: Materials that support and guide reflection include questions, cases or instances of practice, standards, videotapes, student work—in short, materials that provide a *way* to reflect and something *upon which* to reflect.
- Adequate time: By definition, reflection requires pausing, looking back on or deeply into practice, and considering its implications. By nature, to do so takes time—time that is often severely lacking in schools and the professional activities of teaching.

The reflective activities of the teachers throughout the study that they identified as highly valuable all incorporated many if not all of these conditions. Of all of their activities, the creation of a National Board portfolio most consistently provided these conditions.

To illustrate, consider one participant's experience with the portfolio. She was intrigued by the National Board and decided to undertake the certification process as a professional growth experience (intentionality). She had learned to reflect on her practice as a preservice teacher and made reflection a regular part of her teaching (capacity). She felt safe to critique her own practice in writing for an organization that clearly understood the dilemmas of teaching and invited her to consider them openly (climate). She used the large packets of National Board materials to guide her thinking about her lessons throughout the year (materials). She had approximately six months to complete the portfolio (time)—although it should be noted that to complete the portfolio within that time frame required work during evenings, weekends, and holidays.

The portfolio experience sharply contrasted with other reflective activities in which the conditions were lacking. Compared to experiences like unstructured conversations with colleagues or harried meetings, the example above illustrates that, of the certain conditions found in the study to support teachers reflection, those conditions were most consistently present when the teachers reflected in the context of their portfolios.

Benefits for students. In the Jay study, inservice teachers had to see that the goals of reflection were clearly related to teaching and learning; otherwise, the benefits were seen as negligible and the teachers' interest was slight. Perceived benefits to student learning actually seemed to determine whether or not reflection took place; seeing no direct benefit toward this end, the teachers seemed to opt out of reflection. Those instances where that potential was realized ignited the passion of teachers and drove them to make what they described as noteworthy changes in practice that impacted their own and their students' lives in amazingly significant ways.

The only exception to this necessity for perceived student learning advantages was when teachers saw some other benefit for them, as was the case with many of the teachers' National Board experiences. At these times, even when the teachers perceived the benefits for their own and students' learning to be minimal or only moderate, they nevertheless jumped through the various hoops of the activities for the sake of certification. However, one wonders if this type of reflection is likely to be sustained once the extrinsic motivation of the Board portfolio is ended, a point to be considered in the following Dilemmas section of this paper.

Five Dilemmas

Our studies suggest that for preservice and inservice portfolios to effectively document teacher knowledge, prompt reflective thinking, and foster professional development, five dilemmas will need to be confronted:

- Superficial description or deep reflection?
- Dead-ends or continuing professional development?
- High-stakes assessments—motivating or distorting?
- New technological tools—affording or constraining?
- Portfolios and professional status—recognition or risk?

We will discuss each of these dilemmas in turn.

Superficial description or deep reflection?

> "Reflection" can range from a somewhat superficial description of practice to an analysis of alternative perspectives to a kind of critical questioning that considers which students are not being served. How do we prompt higher quality teacher thinking about practice?

A dilemma surfaced when teachers described their process of developing pieces for the National Board portfolio that didn't challenge their thinking. Depending on the experience and skill of each teacher, they described different degrees of this dilemma—that is to say, the least experienced teacher was challenged more consistently by the portfolio's demands than the teachers with greater experience. Across the board, however, many of the National Board activities were classified as being only moderately valuable when the teachers compared their teaching to the standards and found them to be quite consistent.

For example, asked if there were any specific benefits to her classroom teaching that resulted from comparing her lessons to National Board standards, one teacher answered, "I don't think so, and I'll tell you why. I'm the same teacher I was before I did it" (Interview, 10/14/00). She reiterated that the reason she applied for certification in the first place was because she thought she was a good teacher, and she still is—although she did add, "Sometimes I deliberately do things a little bit differently because of the process, but generally, I teach the same way I did." Two other teachers agreed, meaning that three of the four teachers felt that the National Board certification reinforced rather than significantly impacted their practice. The reason for this was that, when their practice already met standard, the portfolio development was simply a matter of description. These activities helped teachers clarify what they were doing and why, without

necessarily prompting changes in existing practice. Only when developing the portfolio showed them a contradiction between the National Board images of quality teaching and their own lessons did they engage in deep reflection.

Dead-ends or continuing professional development?

> Using portfolios to assess achievement of preservice teacher education program goals and objectives may result in a portfolio "dead-end." Will NBPTS portfolios prompt ongoing teacher learning?

Teacher portfolios have been proposed as a means of continuing professional development; all the authors of electronic portfolios in Carney's study indicated they are more likely than their traditional counterparts to continue theirs. Participants who authored traditional portfolios, on the other hand, see them as a finished product—none had any plans for further development. All admitted their portfolios would end up in a drawer or on a shelf. If one intends the portfolio to be a working document and part of a teacher's program of professional development, these traditional preservice portfolios represent a dead-end.

Electronic portfolio authors, on the other hand, see their portfolios as the beginning of a process. All three plan to pursue certification from the National Board of Professional Teaching Standards and see their electronic portfolios as a start. The electronic portfolio authors also anticipate posting their portfolios, or parts of them, as a teacher web site for students, or as a way to show parents their qualifications.

Inservice teachers who authored NBPTS portfolios were motivated to "jump through the hoops" in order to gain certification. However, the Jay study indicated that these teachers were impatient with parts of the process that they didn't see as directly

beneficial to student learning. Will these teachers continue using their portfolios to document professional growth?

The teachers in this study did not convincingly exhibit continued *reflection* on National Board standards, nor did they reveal themselves to be reflecting in ways related to the National Board portfolio creation once they were certified. On the other hand, all of the teachers pointed to enduring changes (if minor) in their *practice* as a result of the National Board certification process. On a side note, however, National Board certified teachers are often heard to say that the certification process is the "best professional development" they've ever experienced. This contradiction in the long-range effects of creating a National Board portfolio warrants further study.

High-stakes assessments—motivating or distorting?

> Using preservice portfolios as a job artifact inhibits the representation of problems of practice; yet suggesting they are only to meet a degree requirement makes preservice teachers less willing to engage fully in the process. When inservice portfolios are done as part of a high-stakes assessment, reflection often turns into tunnel vision at the expense of student learning.

This dilemma was raised by the high-stakes nature of portfolios-as-assessment. It was true for both preservice and inservice portfolio, though in different ways.

Teacher education programs that have their students construct portfolios face a dilemma when it comes to purpose and audience. In suggesting teacher portfolios might accomplish multiple purposes, we make it likely they will accomplish none of them well. Yet suggesting the portfolio is for one purpose only—to meet a degree requirement—arouses a certain amount of recalcitrance among preservice teachers, especially among those who are not naturally reflective or who find writing to be laborious. Telling preservice teachers that their portfolio will be useful for getting a job, on the other hand,

motivates them to accomplish the task, but can undermine the portfolio's usefulness as a reflective tool and as an honest representation of self. A similar dilemma may arise for practicing teachers whose readers include administrators with the power to promote or reward the teacher monetarily.

The audience implied by portfolio as job artifact makes it unlikely that preservice teachers will engage in any deep, candid investigations of their own practice. And in allowing preservice teachers to construct portfolios in which they gloss over the weaknesses and problems of their teaching practice, we may be contributing to the current culture of isolation in the profession. Imbued with the idea that mistakes ought to be hidden, teachers are forced to construct their knowledge of practice privately rather than in a community of practitioners.

As for the experienced teachers developing portfolios for the National Board, the high stakes nature of the assessment was in many ways a motivating factor. The teachers spend extraordinary amounts of time delving deeply into their own practice, student work, and the standards for the sake of the portfolio, knowing that their professional status was at risk. However, even when the teachers perceived the benefits for their own and students' learning to be minimal or only moderate, they nevertheless jumped through the various hoops of the activities for the sake of certification. Herein lies the dilemma, for teachers devoted significant attention even to the aspects of the portfolio that did little or nothing to improve their practice, simply because they wanted to do well on the assessment.

Furthermore, the teachers indicated that their reflection of the type prompted by the National Board wasn't necessarily sustained once the extrinsic motivation of the

Board portfolio had ended. Even though isolated learning events emerged from portfolio creation, it seemed questionable as to whether such events would happen again in the absence of such a high-stakes purpose. One teacher's comment illustrates this:

> When you're preparing it for National Board, you're so focused …[It's] very tiring… because you're so concerned with making sure everything is at the highest standard….Surely you should teach that way everyday, but it's very exhausting. So I don't always teach at that same level. I can't maintain that same level of instruction for long periods of time (Interview, 5/16/00).

Although all of the teachers noted some residual influences, they didn't feel the same motivation to engage in such a comprehensive process once their portfolios had been submitted.

New technological tools—affording or constraining?

> New technologies (video, multimedia presentation, web authoring, etc) offer new opportunities for capturing and communicating teacher knowledge; their affordances include not only potential for continuing development, but also the capability for creating multiple versions of a portfolio for different audiences. However, their difficulty of use can divert teacher attention from deep reflection on practice to more mechanical concerns. Web portfolios may also pose a personal revelation dilemma for teachers.

Electronic portfolios have some significant advantages over traditional formats. Through video and other multimedia they can capture the complexity of teaching practice in ways paper texts cannot, and, as noted earlier, portfolio authors seem to see them as part of a process of continuing development. Hypertext also allows an author to create multiple paths through a portfolio for different readers—or, if on CD, entirely different versions of one's portfolio to meet the needs of particular audiences (i.e., prospective employers would get a "showcase" version; whereas, the teacher education program would receive the full growth portfolio).

Web portfolios also offer the potential for the sharing of teacher knowledge in ways never before possible. By providing a structure for discourse about artifacts of teaching and learning, electronic teachers' portfolios are one place where a teachers' language of practice could develop. Knowledge is developed in a profession as practitioners talk about problems of practice with others in their professional community. Teachers have traditionally lacked the tools and venues for communicating their professional knowledge. Web technology enables us to establish that discourse in online communities of teachers. Wineburg (1997) saw portfolios as opportunities for social learning—web portfolios may extend that social learning beyond the confines of the local setting.

These electronic portfolio affordances are accompanied by some serious constraints, however. Most teachers, preservice and inservice, don't have a great deal of expertise with the hardware and software one typically uses for electronic portfolio authoring. As a result, they find themselves struggling with technical details when they should be reflecting deeply on their teaching. Writing for electronic presentation also requires the author to think through an enormous number of complex issues involving information design—for a genre whose conventions are still emerging.

Electronic portfolio authors were also very concerned about exposing themselves and their novice teaching practice to vast numbers of potentially critical readers on the web. The Carney study suggests we may face a personal revelation dilemma in posting teaching portfolios on the web. Portfolios of one's teaching practice are felt to be very personal documents. How receptive will teachers be to sharing what one participant called her "wounds," with countless strangers on the web? Paradoxically, the

technology that affords teachers the opportunity to share teaching knowledge widely with peers may prove too revealing for them to deal candidly with problems of practice. Student privacy rights make the issue even more troublesome.

Portfolios and professional status—Recognition or risk?

> Teachers choosing to create portfolios face personal and professional risks. How do we provide the support they need to deal honestly with problems of practice?

Preservice teachers found the process of portfolio authoring to be "intimate," and were reticent about exposing the "wounds" of their novice teaching practice to the possibly unsympathetic evaluation of unknown readers or potential employers. One possible (though only partial) solution to this dilemma would be to encourage preservice teachers to author *two* portfolios—one for their teacher education program, another for the job search. Trying to write for these dual purposes and audiences results in a portfolio that is not well-adapted for either.

Preservice teachers need to use their portfolios to reflect honestly on problems they encounter while learning the complex skills and judgments required of a good classroom teacher. A portfolio of this type would be a *developmental portfolio*—one that documents thinking and growth over time. The developmental portfolio could then be used as the basis for a *presentation* portfolio designed for the job search. The most accomplished teaching performances could be culled from the developmental portfolio and new entry slips appropriate to a prospective employer written. (An electronic portfolio would be well-suited for this use since hypertextual links can be provided for different audiences.)

For the experienced teachers, applying for National Board certification via the portfolio process was a professional risk—one that had potential rewards in the form of status, bonuses and professional recognition. All four of the teachers participating in the study had already achieved certification, and they all noted that they had received a variety of benefits. One teacher, in particular, found that the certification allowed her to do some things professionally that she had always *wanted* to do, but wasn't able to.

One teacher spoke on the subject of professional opportunities—a benefit she received from National Board certification that she believed she couldn't have gotten otherwise. For her, this included becoming involved as an instructor and mentor in a teacher education program at a local university, participation in a grant, an invitation to co-author a book, and facilitation for other National Board candidates.

> I've always been active in my profession. So what it's done for me is allowed me to go out and make contacts and people listen to me now. Like when I tell [the local university] they could have used me any time in the last 14 years in my profession. But they never would have thought to, because oh, I'm just some math teacher. But now that I have that credential that tells them, ooh, this is one of the best math teachers you can hook your students up with, then they listen. You see, that's the kind of thing that's kind of ironic about it. I've always been good. But nobody cared. Well, they didn't know, and they didn't care (Interview, 10/14/00).

Later, she added, "Like I said, what I think I did was good all along. And reflecting on it, nobody would care until I had that piece of paper, until I got that piece of paper so I could go forward with what I wanted to do (Interview, 10/14/00). Both King and Underwood similarly said they had their eyes out for opportunities that were open to them once they were certified.

For these and other reasons related to the benefits of National Board certification, the risk was worth the effort. However, it is interesting the experience of one teacher's

colleague, who completed the portfolio process and didn't receive certification. As her friend (a teacher in the study) reported, "She was devastated. Absolutely devastated." This comments suggests that the professional risk associated with the National Board certification process is significant, with potential negative effects for those who don't succeed.

Conclusion

Ball and Cohen (1999) have recently proposed a "practice-based theory of professional education." They call for a new emphasis in (preservice and inservice) teacher education on the investigation of practice—making "systematic study and analysis of learning the core of professional education" (p. 16). Portfolios could provide a structure for the kind of practice-based teacher learning Ball and Cohen advocate, if we put concrete records of teaching and learning at the center and use them to prompt deep reflection about one's teaching practice. With the advent of new communication technologies, portfolios may be able to play another role as well—portfolio as discourse of practice.

If we expect teacher portfolios to achieve these goals and fulfill the expectations of their proponents, however, we must carefully consider how factors in a setting afford and constrain teacher thinking; these factors include the specifics of particular portfolio frameworks, the tools with which the portfolios are authored, teacher intentionality, and the attitudinal and practical climate of the setting. We must recognize and somehow deal with the dilemmas that arise when we attempt to translate the theory of teacher portfolios into practice.

Works Cited

Ball, D. L., & Cohen, D. K. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), Teaching as the learning profession (pp. 3-32). San Francisco: Jossey-Bass.

Carney, J. M. (2001). Electronic and traditional paper portfolios as tools for teacher knowledge representation. Unpublished doctoral dissertation, University of Washington, Seattle.

Jay, J. K. (2001). Matters of reflection in quality teaching: A study of teachers' reflection in the contexts of their professional lives. Unpublished doctoral dissertation, University of Washington, Seattle.

Richert, A.E. (1990). Teaching teachers to reflect: A consideration of programme structure. Journal of Curriculum Studies, 22(6), 509-527.

Schon, D. (1983). The reflective practitioner: How professionals think in action. New York: Basic Books.

Shulman, L. (1987a). Assessment for teaching: An initiative for the profession. Phi Delta Kappan, 69, 38-44.

Shulman, L. (1987b). Knowledge and teaching: Foundations of the new reform. Harvard Educational Review, 57(1), 1-22.

Shulman, L. (1992, April). Portfolios for teacher education: A component of reflective teacher education. Paper presented at the American Educational Research Association, San Francisco.

Wineburg, S. (1997). T.S. Eliot, collaboration, and the quandaries of assessment in a rapidly changing world. Phi Delta Kappan, 79(1), 59-65.

Wolf, K., Whinery, B., & Hagerty, P. (1995). Teaching portfolios and portfolio conversations for teacher educators and teachers. Action in Teacher Education, 17(1), 30-39.